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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,995	12/15/2003	Gerald Marron	132258 CMI-0001-100	2971

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PHILADELPHIA, PA 19103-3508

EXAMINER
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JULES, FRANTZ F

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/735,995	<b>Applicant(s)</b> MARRON, GERALD	
	<b>Examiner</b> Frantz F. Jules	<b>Art Unit</b> 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-12, 14-16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-12, 14 and 18 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by McGrath (US 3,022,968).

Claims 1-2 and 6

McGrath discloses a railroad frog apparatus for connecting intersecting rail lines comprising a body having flangeway that intersect as shown on the top surface; and at least one connection plug (16, 18) extending from the body for connecting to a running rail; the at least one connection plug having a cross-sectional profile that is substantially identical to a cross-sectional profile of the running rail, wherein the apparatus is constructed of rail steel as disclosed in col 2, lines 63-65.

The railroad frog apparatus further comprising first, second, third, and fourth connection plugs extending from the body as shown in fig. 2, each connection plug having a cross sectional profile that is substantially identical to a cross sectional profile of the running rail to which that connection plug will connect in accordance with claim 2.

The railroad apparatus being constructed of a single piece rail steel in accordance with claim 6.

***Claim Rejections - 35 USC § 103***

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Staples (258,259) in view of Heim et al (US 3,480,072).

Staples discloses a railroad frog apparatus for connecting intersecting rail lines comprising a body having flangeway that intersect as shown on the top surface; and at least one connection plug (a<sup>5</sup>, a<sup>6</sup>) extending from the body for connecting to a running rail; the at least one connection plug having a cross-sectional profile that is substantially identical to a cross-sectional profile of the running rail.

The railroad frog apparatus further comprising first, second, third, and fourth connection plugs (a<sup>1</sup> - a<sup>4</sup>) extending from the body, each connection plug having a cross sectional profile that is substantially identical to a cross sectional profile of the running rail to which that connection plug will connect.

The railroad apparatus being constructed of a single piece steel.

Staples disclose all of the features as disclosed above but does not disclose a railroad frog apparatus constructed of rail steel. The general concept of constructing a railroad frog of rail steel falls within the realm of common knowledge as obvious mechanical expediency and is well known in the art as illustrated by Heim et al which discloses the teaching of using a rail steel in a railroad frog, see col 3, lines 9-10, 46-47, col 4, lines 18-22. It would have been obvious to one of ordinary skill in the art at the time of the

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invention to modify Staples to include the use of rail steel in his advantageous railroad frog apparatus as taught by Heim et al in order to obtain in the coupling zone a steel material containing a relatively small proportion of manganese and carbon in order to improve the tenacity of the steel.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Staples (258,259) and Heim et al (US 3,480,072), as applied to claim 1, and in view of The Prior Art Drawing (Fig. 1).

Staples and Heim et al teaches all the limitations of claim 3 except for a railroad frog apparatus comprising first and third connection plugs having cross sectional profiles for connecting a first type of running rail and second and fourth connection plugs having cross sectional profiles for connecting a second type of running rail. The general concept of providing a first and third connection plugs having cross sectional profiles for connecting a first type of running rail and second and fourth connection plugs having cross sectional profiles for connecting a second type of running rail is well known in the art as illustrated by The Prior Art Drawings (Fig. 1) which disclose the teaching of first and third connection plugs having cross sectional profiles for connecting a first type of running rail and second and fourth connection plugs having cross sectional profiles for connecting a second type of running rail. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Staples and Heim et al to include the use of first and third connection plugs having cross sectional profiles for connecting a first type of running rail and second and fourth connection plugs having cross sectional

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profiles for connecting a second type of running rail in his advantageous railroad frog apparatus as taught by The Prior Art Drawings in order to provide flexibility in using different types of rails with the frog.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Staples (US 258, 259) in view of Heim et al (US 3,480,072) and Testart (US 5,042,755).

#### Claim 15

Staples teaches all the limitations of claim 15 except for a railroad frog apparatus constructed from a single piece of rail steel and comprising the steps of butting and welding each of the connecting plug to the rails. The general concept of constructing a railroad frog of rail steel falls within the realm of common knowledge as obvious mechanical expediency and is well known in the art as illustrated by Heim et al which discloses the teaching of using a rail steel in a railroad frog, see col 3, lines 46-47, col 4, lines 18-22. Also, the general concept of butting and welding each of the connecting plug to the rails is well known in the art as illustrated by Testart which discloses the teaching of butting and welding a connecting plug (3A, 3B) of a railroad frog to a rail, see col 5, lines 5-10, 23-27. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Staples to include the use of a single piece rail steel in his advantageous railroad frog apparatus as taught by Heim et al in order to obtain in the coupling zone a steel material containing a relatively small proportion of manganese and carbon in order to improve the tenacity of the steel. In addition, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Staples and Heim et al to include the use of the steps of butting and welding

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each of the connecting plug to the rails in his advantageous railroad frog as taught by Testart in order to eliminate the existence of a joint thereby increasing strength in the rail and frog assembly.

7. Claims 4 and 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Staples (258,259) and Heim et al (US 3,480,072) and Testart (US 5,042,755), and in view of Connelly (EP 0 602 728 A1).

Staples, Heim et al and Testart teach all the limitations of claims 4 and 16 except for a railroad frog apparatus comprising welding of the connecting plug to the rail by a thermite weld. The general concept of providing a thermite weld for connecting rails to a frog assembly is well known in the art as illustrated by Connelly which discloses the teaching of a thermite weld for joining rails and frogs, see page 2, lines 1-2. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Staples, Heim et al and Testart to include the use of connecting the rail to the frog by a thermite weld as taught by Connelly in order to achieve increased fatigue resistance in the rail and frog assembly.

8. Claims 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Staples (US 258, 259) and Heim et al as applied to claim 1 above, and in view of Ramirez et al (US 6,266,866).

Claims 7

Regarding using the method of machining for forming the apparatus as recited in claims 7, it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify Staples and Heim et al to include the use method of machining for forming the apparatus in his advantageous system as taught by Ramirez et al, as method of machining of a part is a common and everyday occurrence throughout the railroad frog apparatus design art and the specific use of machining of the railroad frog would have been an obvious matter of design preference depending upon such factors as the loading imposed on the railroad frog, the yield strength of the railroad frog material, the stress concentration factor allowable in the railroad frog; the ordinarily skilled artisan choosing the best stress profile corresponding to a particular loading imposed on the side walls which would most optimize the cost and performance of the device for a particular application at hand, based upon the above noted common design criteria.

9. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Staples and Heim et al, as applied to claim 1 above, and in view of Wharton (US 211,607).

#### Claims 8-9

Staples and Heim et al teach all the limitations of claims 8-9 except for a flangeway having a convex portion on a floor defined by a first arc extending between first and second points that are at flangeway depths so as to avoid contact with a flange of a train wheel passing through the flangeway. The general concept of providing "a floor having a convex portion defined by a first arc extending between first and second points that are at flangeway depths so as to avoid contact with a flange of a train wheel passing through the flangeway depth" is well known in the art as illustrated by Wharton



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Jr which discloses in figs. 3-4 the use of "a floor having a convex portion (1) defined by a first arc extending between first and second points (1, 2) that are at flangeway depths so as to avoid contact with a flange of a train wheel passing through the flangeway". It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Staples to incorporate the use of "a floor having a convex portion defined by a first arc extending between first and second points that are at flangeway depths so as to avoid contact with a flange of a train wheel passing through the flangeway" in his advantageous railroad frog apparatus as taught by Wharton in order to reduce stress on the wheel of the railroad car.

***Allowable Subject Matter***

10. Claims 10-12, 14 and 18 stand allowable.

***Response to Arguments***

11. Applicant's arguments filed 02/16/2005 have been fully considered but they are moot in view of the new grounds of rejection.

Applicant's argument regarding the failure of the prior art reference Staples to disclose a railroad frog apparatus constructed of rail steel causes the withdrawal of the anticipation rejection made in the previous office action. The general concept of using rail steel material in the construction of a railroad frog is well known in the art as illustrated by the Heim et al reference which disclose the teaching of weldable rail steel in col 3, lines 9-10. Also, the McGrath reference discloses the use of rail steel in a frog apparatus. The teaching of a weldable rail steel by Heim et al establishes a prima facie case of obviousness to an ordinary skill in the art.

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***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz F. Jules whose telephone number is (703) 308-8780. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph S. Morano can be reached on (703) 308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frantz F. Jules  
Primary Examiner  
Art Unit 3617

FFJ

April 14, 2005

**FRANTZ F. JULES  
PRIMARY EXAMINER**

